

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

ENTEGRIS, INC.,

Plaintiff,

v.

PALL CORPORATION,

Defendant.

) Consolidated Case

) Case No. 03-10392-GAO

PALL CORPORATION,

Plaintiff,

v.

ENTEGRIS, INC.,

Defendant.

) Consolidated Case

) Case No. 04-10887-GAO

ENTEGRIS, INC.,

Plaintiff,

v.

PALL CORPORATION,

Defendant.

) Consolidated For Purposes of Discovery
) (Including Claim Construction)

) Case No. 06-10601-GAO

ENTEGRIS, INC.,

Plaintiff,

v.

PALL CORPORATION,

Defendant.

) Consolidated For Purposes of Discovery
) (Including Claim Construction)

) Case No. 06-11494-GAO

PLAINTIFF ENTEGRIS, INC.'S REPLY CLAIM CONSTRUCTION BRIEF

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION.....	1
II. OVERVIEW.....	1
III. ENTEGRIS PROPERLY RELIES ON EXPERT TESTIMONY AS ADDITIONAL SUPPORT FOR PROPOSED CONSTRUCTIONS FULLY SUPPORTED BY THE INTRINSIC RECORD.....	3
IV. PALL’S CLAIM CONSTRUCTION ARGUMENTS ARE UNSUPPORTED BY THE RELEVANT RECORD.....	6
A. “Fluid Processing Module”.....	6
B. “Vent Position”, “Gas Vent” and “At Least One Connector That Is A Gas Vent From The Housing”.....	8
1. The “vent position” is a connector.....	9
2. The disputed terms require venting substantially all gas from the module.....	10
C. “Dispense Pump”.....	12
D. “Disposable”.....	14
E. “Quick-Connect Manifold”.....	16
F. “Receptor”.....	18
G. “Separation Module”, “A Separation Element Contained Within The Housing” and “A Separation Element Within The Housing”.....	19
V. CONCLUSION.....	23

TABLE OF AUTHORITIES

	Page(s)
CASES	
<i>3M Innovative Props. Co. v. Avery Dennison Corp.</i> , 350 F.3d 1365 (Fed. Cir. 2003).....	7, 10
<i>Abbott Laboratories v. Sandoz, Inc.</i> , 566 F.3d 1282 (Fed. Cir. 2009).....	9
<i>Amazon.com, Inc. v. Barnesandnoble.com, Inc.</i> , 239 F.3d 1343 (Fed. Cir. 2001).....	2
<i>Bicon, Inc. v. The Straumann Co.</i> , 441 F.3d 945 (Fed. Cir. 2006).....	15
<i>Eaton Corp. v. Rockwell Int’l Corp.</i> , 323 F.3d 1332 (Fed. Cir. 2003).....	15
<i>Envtl. Designs, Ltd. V. Union Oil Co.</i> , 713 F.2d 693 (Fed. Cir. 1983).....	5
<i>Hewlett-Packard Co. v. Bausch & Lomb Inc.</i> , 909 F.2d 1464 (Fed. Cir. 1990).....	2
<i>Hormone Research Found., Inc. v. Genentech, Inc.</i> , 904 F.2d 1558 (Fed. Cir. 1990).....	21
<i>Kraft Foods, Inc. v. Int’l Trading Co.</i> , 203 F.3d 1362 (Fed. Cir. 2000).....	22
<i>Nat’l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd.</i> , 357 F.3d 1319 (Fed. Cir. 2004).....	2
<i>Pause Tech. v. TiVo Inc.</i> , 419 F.3d 1326 (Fed. Cir. 2005).....	17
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005).....	passim
<i>Pitney Bowes, Inc. v. Hewlett-Packard Co.</i> , 182 F.3d 1298 (Fed. Cir. 1999).....	15
<i>Rapoport v. Dement</i> , 254 F.3d 1053 (Fed. Cir. 2001).....	15
<i>Renishaw PLC v. Marposs Societa’ Per Azioni</i> , 158 F.3d 1243 (Fed. Cir. 1998).....	15

Vitronics Corp. v. Conceptronic, Inc.,
90 F.3d 1576 (Fed. Cir. 1996).....3, 6

WMS Gaming Inc. v. Int’l Game Tech.,
184 F.3d 1339 (Fed. Cir. 1999).....2

OTHER AUTHORITIES

U.S. Patent No. 7,350,821.....8

I. INTRODUCTION

On July 30, 2010, the parties exchanged their respective opening submissions on claim construction. On September 1, 2010, the parties served and filed their responsive claim construction briefs. In accordance with the Court's July 20, 2010 Electronic Order setting the schedule for claim construction briefing, Entegris respectfully submits this reply in response to Pall's Opposition to Entegris's Opening Claim Construction Brief (D.I. 199, hereinafter "opposition").¹

II. OVERVIEW

Pall's opposition is remarkable for what it does not say. It does not justify Pall's proposal to construe the claims in a manner that contradicts the intrinsic record -- in many cases, the words of the claims themselves. It does not provide any authority for its proposition that claim limitations not found in Pall's prior art should be ignored -- asserting, without reference to any case law, that such limitations simply can be ignored because they are "not an effective limitation." And, it does not address substantively many of Entegris's arguments refuting Pall's proposed constructions.

Pall's opposition further reflects the approach to claim construction taken in its opening memorandum -- an approach dictated by its desired invalidity defense. Pall's approach is contrary to well-settled law, and Pall's discussion of its invalidity defense is irrelevant to claim construction. Pall suggests that the Court's preliminary injunction rulings have endorsed its invalidity positions. That too is incorrect.

As the Court no doubt recalls, when it dissolved the preliminary injunction, the Court did not reach an ultimate conclusion on the patents' validity or the relevance of Pall's prior art.

¹ Unless otherwise indicated, docket entry citations are to *Entegris v. Pall*, Civil Action No. 03-CV-10392-GAO.

Rather, the Court determined that the circumstances supporting its original order had changed, and the extraordinary relief provided by a preliminary injunction was no longer warranted. Moreover, contrary to Pall's assertion, the Federal Circuit, did not rule on the ultimate question of validity or the relevance of Pall's prior art. Instead, the Federal Circuit found that this Court "did not abuse its discretion in dissolving the preliminary injunction" (D.I. 129 at 19-21).

In the 2006 preliminary injunction proceedings regarding U.S. Patent No. 7,021,667 ("the '667 patent"), the Court determined that Pall met its burden of showing "mere vulnerability," not "actual invalidity" (06-10601 D.I 41 at 4, 16). At the preliminary injunction stage, Entegris, as plaintiff, bore the burden of proving that there were no substantial questions of fact to preclude a preliminary injunction. *See, e.g., Nat'l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd.*, 357 F.3d 1319, 1324-25 (Fed. Cir. 2004). Going forward, Pall will need to go beyond merely raising a question as to the vulnerability of the patents-in-suit; instead, Pall bears the heavier burden of proving invalidity by clear and convincing evidence. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999) ("Because a patent is presumed to be valid the party asserting invalidity has the burden of showing invalidity by clear and convincing evidence."). This burden is particularly taxing given that the PTO allowed two of the patents despite being presented with many of the prior art references relied on by Pall. *See, e.g., Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469 (Fed. Cir. 1990) ("This burden [of proving invalidity] is especially difficult when the prior art was before the PTO examiner during prosecution of the application.").

Regardless of Pall's ultimate burden of proof at trial, Pall's continued assertion of and reliance on prior art references to support claim construction proposals informed by its invalidity arguments is inappropriate. *See Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343,

1351 (Fed. Cir. 2001) (claims must be construed before infringement and invalidity arguments are addressed); *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (reliance on prior art is unnecessary and improper when disputed terms can be understood from careful reading of the intrinsic evidence). Pall's approach asks the Court to put the cart before the horse. Remarkably, even though Pall expressly and impermissibly relies on prior art references in support of its proposed constructions, it accuses Entegris of "litigation-inspired" constructions (D.I. 199 at 1).

Yet, while Entegris admittedly chose terms for construction based on their relevance to the parties' disputed positions, it properly proposed constructions fully supported by the intrinsic record, including the plain language of the claims themselves, the patents' specifications, and the prosecution histories. In addition to identifying the support in the intrinsic record, Entegris provided the declaration of Dr. Samir Nayfeh and identified contemporaneous dictionary definitions further supporting its proposed constructions. In contrast, Pall's proposals rely on improper sources. As such, those proposals should be rejected, and the Court should adopt Entegris's proposed constructions.

III. ENTEGRIS PROPERLY RELIES ON EXPERT TESTIMONY AS ADDITIONAL SUPPORT FOR PROPOSED CONSTRUCTIONS FULLY SUPPORTED BY THE INTRINSIC RECORD

The Federal Circuit has made clear that extrinsic evidence such as expert testimony and declarations in patent cases are useful to help the Court understand the technology at issue or establish that a particular term has a particular meaning to a practitioner of the art. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005). The Federal Circuit has also made clear that extrinsic evidence is most valuable when it is in accord with the patent's intrinsic evidence. *See Phillips*, 415 F.3d at 1318. In this case, Dr. Nayfeh offers appropriate extrinsic evidence. For example, Dr. Nayfeh offers opinions about the construction of the disputed terms that are

consistent with and rely on the claim language and the patents' specifications, which the Federal Circuit has held to be the strongest evidence of a claim term's meaning. *Phillips*, 415 F.3d at 1313-17. Similarly, Dr. Nayfeh assists the Court by establishing that the term "dispense pump" has a "particular meaning in the pertinent field." *Id.*; D.I. 193 at ¶¶35-39.

Contrary to Pall's assertion, Dr. Nayfeh's opinions are not conclusory. In concluding that Entegris's proposed constructions are consistent with the understanding of a person of ordinary skill in the art at the time of the invention, Dr. Nayfeh's declaration examines in detail the intrinsic record, including the language and context of the claims themselves, the specification, and the prosecution histories. Dr. Nayfeh's declaration and the contemporaneous dictionary definitions cited therein provide *additional* support to Entegris's proposed constructions -- they are not the primary basis for those proposed constructions.

Additionally, Pall incorrectly asserts that Dr. Nayfeh, has changed his positions over the course of this litigation, citing as one example Dr. Nayfeh's opinion regarding the qualifications of a person of ordinary skill in the art at the time of the invention. At the preliminary injunction phase in 2003, where the pump was not at issue, Dr. Nayfeh stated that experience in the pump and filtration industry was unnecessary (Nayfeh Supp. Decl. at ¶4).² Now, with all of the asserted claims before the Court (claims that now include pumps), Dr. Nayfeh adopted Dr. Igor Paul's (Pall's expert) proposal, with one minor addition. Dr. Paul and Dr. Nayfeh proposed the following regarding a person of ordinary skill in the art:

² In the portion of Dr. Nayfeh's testimony cited by Pall, Dr. Nayfeh was clear that his opinion related to the issues presented by the claims -- claim 3 of U.S. Patent No. 6,068,770 ("the '770 patent") and claim 1 of U.S. Patent No. 6,378,907 ("the '907 patent"), neither of which include a pump -- that were at issue at the preliminary injunction stage, stating: "I don't think that is necessary ***for the issues here at stake, which don't really concern the inner workings of the pump***" (D.I. 61 at 19:16-20) (emphasis added).

Dr. Igor Paul (Pall’s expert)	Dr. Samir Nayfeh (Entegris’s expert)
one who “has at least a bachelor’s degree in mechanical engineering, or equivalent experience, with at least a few years experience in the filtration and fluid processing area” (06-10601 D.I. 23 Ex. 5 at ¶8)	one who “would have a bachelor’s degree in mechanical engineering or the equivalent degree or commensurate work experience, two or more years of experience in the area of filtration and pump systems, and knowledge of their application in the semiconductor or other similar industry” (D.I. 193 at ¶17)

The only difference between the two is that Dr. Nayfeh believes -- that the person of ordinary skill would have familiarity with the semiconductor industry -- the industry in which the problem solved by the patents arose and the specific background of the inventors. *Envtl. Designs, Ltd. V. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir. 1983) (citing the education of the inventors as one factor in determining the level of ordinary skill in the art).

The specification makes clear that the problem addressed by the inventors arose in the context of the semiconductor industry (*e.g.*, ‘907 patent at 1:18-30). Some dependent claim terms, such as claims 9 and 10 of U.S. Patent No. 7,037,424 (“the ‘424 patent”), are specifically directed to the semiconductor industry.³ It stands to reason that a person of ordinary skill in the art would have some familiarity with that industry, though the invention may be applied to other fields where a similar need for contamination control is also critical (Nayfeh Supp. Decl. at ¶5).

³ It is of note that in the Joint Claim Chart of Agreed-Upon Terms, Disputed Terms for Construction, and Proposed Constructions, filed on June 28, 2010, Pall contended that the terms “semiconductor process fluid” and “semiconductor process fluid comprises at least one of a photochemical, a primer, an adhesion promoter, a photoresist, an edge bead remover, an antireflective coating, a developer, and a dielectric” in claims 9 and 10 of the ‘424 patent were “not [] effective field of use limitation[s]” (D.I. 181 at 6). Now, Pall argues that these terms expressly limit certain claims to the semiconductor industry, acknowledging that the field has particular relevance to the claimed inventions (D.I. 199 at 6).

IV. **PALL’S CLAIM CONSTRUCTION ARGUMENTS ARE UNSUPPORTED BY THE RELEVANT RECORD**

A. **“Fluid Processing Module”**

The term “fluid processing module” appears in asserted claims 1, 2 and 9 of the ‘907 patent. The parties’ dispute regarding the term “fluid processing module” is set forth below:

Claim Language	Entegris’s Proposed Construction	Pall’s Proposed Construction
“fluid processing module”	fluid separation module	fluid processing module

As discussed in Entegris’s responsive claim construction brief (D.I. 201 at 4-6), Pall improperly relies on the Sumitomo references and an incorrect statement by the Examiner during prosecution of the application that resulted in the ‘907 patent. In its opposition, Pall distorts this Court’s analysis of the Sumitomo references during the preliminary injunction proceedings into an alleged construction of “fluid processing module” (D.I. 199 at 12-13). The facts and law remain unchanged. This Court has not construed the term “fluid processing module” (D.I. 201 at 4). Instead, the Court analyzed the Sumitomo references for the purposes of determining whether Entegris had met its extraordinary burden at the preliminary injunction stage. (D.I. 106 at 8). No law supports Pall’s attempt to construe the claim terms by looking prematurely to Pall’s desired invalidity defense. To the contrary, the law is clear that Pall’s reliance on the Sumitomo references for claim construction is improper. *Vitronics Corp.*, 90 F.3d at 1584-85.

Nor does Pall’s construction find support in the erroneous statements of the Examiner during prosecution when she restricted the then-pending claims to two allegedly distinct groups. According to Pall, the Examiner divided the claims in to group I, which was limited to separation module claims, and group II, which claimed a purportedly broader category of fluid “processing” modules. (D.I. 199 at 14). However, group I was not limited to claims with a filter. Group I included claims directed to both a fluid separation module and a connector apparatus (Nayfeh

Supp. Decl. at ¶¶9-11; D.I. 192 Ex. F at ME070423-25). Thus, Pall's assertion that group I was limited to the fluid separation module is incorrect.

Similarly, Pall (and the Examiner) are incorrect that group II included claims "not limited to a system including a filter, but to a fluid processing module" (D.I. 192 Ex. F at ME070606). The specification discusses only two modules -- a fluid separation module and a connector apparatus. Of these, the only one that processes fluid is the fluid separation module. In particular, the connector apparatus does not have a filter and is "nonworking in that it performs no function other than transferring fluid therethrough" ('907 patent at 2:64-3:4). Thus, the claims of group II, which were directed to a fluid processing module (D.I. 192 Ex. F at ME070493-94), are limited to the only fluid processing described in the '907 patent, which is fluid separation (D.I. 193 at ¶¶21-23; Nayfeh Supp. Decl. at ¶12). Therefore, the Examiner (and now Pall) simply mischaracterized the claims of group II.

More importantly, not only was the Examiner's statement incorrect, it is immaterial to claim construction. In particular, an examiner's statement alone does not limit a claim. *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1373-74 (Fed. Cir. 2003) ("[P]rosecution history ... cannot be used to limit the scope of a claim unless the applicant took a position before the PTO.") (quoting *Schwing GmbH v. Putzmeister Aktiengesellschaft*, 305 F.3d 1318, 1324-25 (Fed. Cir. 2002)). And, because the prosecution history represents an on-going negotiation between the applicants and the PTO, it is often less useful for claim construction purposes than the specification or the claims themselves. *Phillips*, 415 F.3d at 1317. The Examiner's incorrect statement (which was never addressed by Entegris during prosecution) is therefore irrelevant to the construction of "fluid processing module."

Finally, Pall’s criticism that Entegris’s proposal to construe the “fluid processing module” as a fluid separation module would read out a preferred embodiment – the connector apparatus (D.I. 199 at 13) – is meritless. As discussed above, group I included claims directed to the connector apparatus. Entegris’s election to pursue group II, directed to a manifold assembly and a fluid processing module (D.I. 192 Ex. F at ME070493-94, ME070649) did not exclude the so-called “preferred embodiment” of the connector apparatus. Entegris pursued the connector apparatus elsewhere in its family of patents.⁴

For each of the reasons stated above, the Court should reject Pall’s proposed construction, and Entegris’s proposed construction should be adopted.

B. “Vent Position”, “Gas Vent” and “At Least One Connector That Is A Gas Vent From The Housing”

The term “vent position” appears in asserted claim 2 of the ‘907 patent. The term “gas vent” appears in all asserted claims of the ‘667 and ‘424 patents. The term “at least one connector that is a gas vent from the housing” appears in asserted claims 1, 2, 5, 14, 15 and 17 of the ‘424 patent. The parties’ disputes regarding these terms are set forth below:

Claim Language	Entegris’s Proposed Construction	Pall’s Proposed Construction
“vent position”	a third connector on the fluid processing module which has the primary purpose of venting substantially all gas from the module	a position on the fluid processing module which has the primary purpose of venting gas from the module

⁴ Attached as Exhibit A to the Declaration of Stuart W. Yothers In Support of Entegris, Inc.’s Reply Claim Construction Brief is a copy of U.S. Patent No. 7,350,821, which, though otherwise irrelevant to this litigation, claims the connector apparatus.

“gas vent”	a connector which has the primary purpose of venting substantially all gas from the module	Pall acquiesces to the Court’s construction in that a “gas vent” is a gas vent which has the primary purpose of venting gas from the filter module.
“at least one connector that is a gas vent from the housing”	at least one connector of the separation module performs the primary function of venting substantially all gas from the interior of the housing	At least one connector of the separation module is a gas vent. “Gas vent” has been construed by the Court.

Contrary to Pall’s assertion, Entegris’s proposed constructions do not “narrow” these claim terms. Rather, Entegris proposes the only constructions supported by the intrinsic record. Pall’s argument that the vent position is not a connector lacks merit, and Pall’s argument that this Court’s prior findings preclude the construction proposed by Entegris is mistaken.

1. The “vent position” is a connector

Pall’s argument that the “vent position” is not a connector divorces the construction of the term “vent position” from the intrinsic evidence. Pall mistakenly relies on *Abbott Laboratories v. Sandoz, Inc.*, 566 F.3d 1282, 1289-90 (Fed. Cir. 2009), to support its contention that the claimed vent “position” is not a “connector” on the flawed reasoning that the specification says “connector” and the claim does not (D.I. 199 at 18). In *Abbott Laboratories*, the patentee described a Crystal A substance in the patent’s specification and then claimed it using that description (as opposed to the term “Crystal A”) in claim 1 of the patent. 566 F.3d at 1289-90. The Court in *Abbott Laboratories* correctly relied on the specification’s description of the substance to determine that the patentee intended to claim only Crystal A. *Id.* Similarly, this Court should consider the ‘907 patent’s specification to properly construe the term “vent position.” The specification describes the vent as a connector: “A third connector comprises a

vent for removing gas from the housing” (‘907 patent at 4:66-67). Thus, as in *Abbott Laboratories*, the Court should conclude that Entegris’s proposed construction of “vent position” as a connector is the only proposal supported by the intrinsic record.

Moreover, Pall’s argument that the term “third” connector is not required in the construction is an attempt to revisit an argument that it has already lost. The Court may recall that during the preliminary injunction phase of this case, Pall asserted that the gas vent and the outlet could be one and the same connector (06-10601 D.I. 23 at 18-29). The Court rejected that argument (06-10601 D.I. 41 at 9). The terms “first,” “second,” and “third” are generally used to distinguish between related instances of an element. *3M*, 350 F.3d at 1371. In the ‘907 patent, the term “third connector” is used to establish the vent position as a connector separate and apart from two other connectors -- the fluid inlet and the fluid outlet (‘907 patent at 4:64-67). Thus, Entegris’s proposed construction of the term “vent position” is consistent with the Court’s prior ruling, maintaining the distinction between an inlet, an outlet and a vent connector. The Court should adopt Entegris’s proposed construction.

2. The disputed terms require venting substantially all gas from the module

As stated above, during the preliminary injunction phase, the issue to be resolved on the expedited basis appropriate for that stage of the case was whether the claims required “that each connector function exclusively as either an inlet, outlet, or gas vent, or whether the connectors can serve multiple functions” (06-10601 D.I. 41 at 8). At that time, Pall’s invalidity arguments depended on a construction that the outlet could be the same as the vent. As such, the Court was *not* asked to consider whether the vent position and gas vent vented substantially all gas from the module. Pall now asserts that Entegris’s arguments regarding the gas vent are inconsistent with its prior position. (D.I. 199 at 33). Pall is incorrect. Entegris’s (and its expert’s) position has

always been that the vent must vent substantially all gas from the module. *See, e.g.*, 06-10601 D.I. 27 at ¶93 (explaining that the gas vent “removes substantially all air bubbles from the separation module”).

In particular, during the 2006 preliminary injunction proceedings, Dr. Nayfeh stated that the claimed gas vent “removes *substantially all* air bubbles from the separation module.” *Id.* (emphasis added). He further elaborated that “[t]he essential purpose of the vent is to provide a mechanism to remove bubbles, which are introduced to the module during the fluid inlet process, so that they are not passed to the filtered-fluid outlet,” and that

[I]t is clear from the specification that the purpose of the gas vent is to allow removal of gas bubbles from the separation module so that they are neither retained within the module nor passed through the filtered-fluid outlet to the dispense pump. This is accomplished by providing an opening distinct from the filtered fluid outlet through which bubbles can be displaced.

(06-10601 D.I. 27 at ¶¶10, 13). Thus, there is nothing new about Dr. Nayfeh’s opinion or Entegris’s proposed construction that “at least one connector of the separation module performs the primary function of venting substantially all gas from the interior of the housing.”

Pall mistakenly relies on Dr. Paul, who opines that the language in column 1 of the ‘667 patent “refers only to contaminants, not bubbles” (D.I. 200 at ¶30). But Dr. Paul’s opinion ignores the rest of the patent’s specification, which clearly indicates that microbubbles *are* contaminants that must be eliminated from the filtered fluids (D.I. 193 at ¶31; Nayfeh Supp. Decl. ¶18). Therefore, Entegris’s proposed construction is consistent with the entirety of the patents’ specifications and should be adopted.

Dr. Paul’s opinion that “for some embodiments, venting may not be required at all” (D.I. 200 at ¶28) is unsupported by the intrinsic record. The specification indicates only that the vent is not active throughout the entire process of dispensing liquids onto a substrate. In such a situation, after the venting of substantially all the gas from module has been accomplished and

“[w]hen venting of gas is not a requirement, a valve or the like in a conduit in fluid communication with the vent connector can be utilized to close fluid flow through the vent connector” (‘667 patent at 5:6-9, ‘424 patent at 5:21-24). This description does not support Pall’s argument that venting substantially all the gas from the module is not a requirement. Rather, it shows only that once the module has been vented, the gas vent can be closed off by a valve, and then opened over the course of the same process when it becomes necessary again to remove all of the microbubbles from the liquid (‘667 patent at 5:6-9 & 6:44-53, ‘424 patent at 5:21-24 & 6:29-38; D.I. 193 at 32; Nayfeh Supp. Decl. at ¶¶16-17).

Pall offers no new arguments about the term “at least one connector that is a gas vent from the housing.” Entegris has previously addressed Pall’s old arguments in its opening claim construction brief (D.I. 191 at 18-20) and responsive claim construction brief (D.I. 201 at 8-9). The Court should adopt Entegris’s proposed constructions for these terms.

C. “Dispense Pump”

The term “dispense pump” appears in asserted claims 1 and 18 of the ‘667 patent. The parties’ dispute regarding the term “dispense pump” is set forth below:

Claim Language	Entegris’s Proposed Construction	Pall’s Proposed Construction
“dispense pump”	a pump used to dispense in metered portions a fluid onto a substrate, such as a semiconductor wafer	a pump used to dispense a fluid

Pall devotes much of its opposition to rebutting a position that Entegris has never taken (D.I. 199 at 20-22). Pall asserts that Entegris (and Dr. Nayfeh) proposed a construction limiting independent claim 14 to “dispensing process fluids onto a semiconductor wafer” (D.I. 199 at 21). This is not true. First, claim 14 does not include the term “dispense pump”. Second,

Pall's opposition incorrectly equates Entegris's proposed construction (i.e., "a pump used to dispense in metered portions a fluid onto a substrate, *such as* a semiconductor wafer" (emphasis added)) with "dispensing process fluids onto a semiconductor wafer" (D.I. 199 at 21). One phrase is absolute, and the other is exemplary. Third, Pall incorrectly suggests that dependent claim 18 depends from independent claim 1 (D.I. 199 at 21). It does not. Entegris has in no way attempted to limit all claims to dispensing fluids onto a semiconductor wafer.

The real disagreement between the parties is whether the "dispense pump" is used to dispense fluids in metered portions (e.g., in an intermittent nature). This is the only operation described by the patents -- and the only operation that makes any sense in the manufacturing context (D.I. 193 at ¶39).

Dr. Nayfeh's recent opinion regarding the construction of "dispense pump" as "a pump used to dispense in metered portions a fluid onto a substrate, such as a semiconductor wafer," is consistent with his statements from the 2006 proceedings. In the 2006 preliminary injunction proceedings, the dispense pump was not at issue (06-10601 D.I. 41) (construing only claim 2 of the '667 patent, which does not recite a pump). The parties have now identified a dispute and asked the Court to construe the term "dispense pump." To aid the Court's construction, Dr. Nayfeh clarifies the function of the dispense pump as dispensing fluid in metered portions, consistent with the on-and-off process described by the patent itself. *See* '667 patent at 6:18-47; '424 patent at 6:33-62.

Pall's sole argument in response to Entegris's proposal that the "dispense pump" dispenses in metered portions is that the term "metered" does not appear in the patent. But, the patent describes precisely the on then off operation set forth in Entegris's proposed construction (6:14-42; Nayfeh Supp. Decl. ¶20). There is no requirement that every word of a claim term's

construction appear in the patent. Indeed, Pall’s proposed rule would run contrary to the Federal Circuit’s reliance on dictionary definitions that are consistent with the intrinsic evidence to inform the meaning of claim terms. *See Phillips*, 415 F.3d at 1322-23. The only requirement is that the proposed construction be supported by the intrinsic record. Here, Entegris’s proposed definition precisely describes the intermittent nature of the pumping activity set forth in the specification. Moreover, Entegris’s proposal is supported by the extrinsic record. As previously explained by Dr. Nayfeh, Entegris’s proposed construction is consistent with contemporaneous dictionary definitions of the term “dispense” (D.I. 193 at ¶38; D.I. 193 Ex. B at 536-37).

Therefore, the Court should construe dispense pump as “a pump used to dispense in metered portions a fluid onto a substrate, such as a semiconductor wafer.”

D. “Disposable”

The term “disposable” appears in all asserted claims of the ‘667 patent and asserted claims 7, 9 and 11-13 of the ‘424 patent. The parties’ dispute regarding the term “disposable” is set forth below:

Claim Language	Entegris’s Proposed Construction	Pall’s Proposed Construction
“disposable”	“Disposable” means that the module is installed and removed as a unit and can be disposed of after removal. When the separation element within the module needs replacement, the entire module is removed from the assembly and disposed of.	The term “disposable” is not an effective limitation. Pall agrees with the Court when it found: “I conclude that the word ‘disposable’ does not breathe life or meaning into claim 2, but is rather merely a statement of what might be typically more desirable as a feature of the fluid separation module.”

Pall’s opposition fails to cite any law to support its position that the disposable nature of the fluid separation module should be overlooked because it was not relied on as a “patentable

feature” or a “significant consideration.” A patentee’s right to exclude is defined by the patent’s claims, regardless of whether a feature of the invention is deemed “significant” or whether it was discussed at length in the patent prosecution process. *See Renishaw PLC v. Marposs Societa’ Per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) (“[T]he resulting claim interpretation must, in the end, accord with the words chosen by the patentee to stake out the boundary of the claimed property.”). In both the ‘667 and ‘424 patents, the patentees expressly claimed a “disposable fluid separation module.” There is simply no law to support Pall’s suggestion that the Court ignore the word “disposable.” In fact, Pall’s suggestion is contrary to well-settled law. *See, e.g., Renishaw*, 158 F.3d at 1248; *Phillips*, 415 F.3d at 1312 (“Because the patentee is required to ‘define precisely what his invention is,’ . . . it is ‘unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.’”) (quoting *White v. Dunbar*, 199 U.S. 47, 52 (1886)).

Pall continues to assert that the term “disposable” in the claims should be ignored because it appears in the preamble, but not the body, of claim 1 of the ‘667 patent (D.I. 199 at 24-25). In advancing this incorrect and unsupportable theory, Pall ignores well-settled law that a claim term in a preamble may give “life, meaning, and vitality” to a claim if a later term depends on a term in the preamble as an antecedent. *Bicon, Inc. v. The Straumann Co.*, 441 F.3d 945, 952-53 (Fed. Cir. 2006); *see also Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (“When limitations in the body of the claim rely upon and derive antecedent basis from the preamble, then the preamble may act as a necessary component of the claimed invention.”); *Rapoport v. Dement*, 254 F.3d 1053, 1059 (Fed. Cir. 2001) (treating the phrase “treatment of sleep apneas” as a limitation because the phrase “to a patient in need of such treatment” would have no proper antecedent without it); *Pitney Bowes, Inc. v. Hewlett-Packard*

Co., 182 F.3d 1298, 1305-06 (Fed. Cir. 1999) (finding that a term in the preamble used as an antecedent to another in the claim is “necessary to give life, meaning, and vitality” to the claim). Here, claim 1 refers to “the” fluid separation module in the body of the claim clearly referring to the “a disposable” fluid separation module of the preamble. As such, the term “disposable” cannot be ignored as Pall suggests. Further, Pall’s preamble argument ignores the fact that the term “disposable” appears in the body of claims 2, 14, and 25 of the ‘667 patent, and that the patentee therefore expressly claimed a *disposable* fluid separation module.

Furthermore, the term “disposable” does not merely describe an intended use, but in the context of the patent, connotes a particular module structure. As expressly defined by the patentees and understood by a person of ordinary skill in the art, “disposable” describes a module “in which the separation element is permanently attached to the housing, [and] which also contains appropriate fluid connections to the rest of the fluid processing system, to form an integrated module” (‘667 patent at 2:1-4; ‘424 patent at 2:4-8; D.I. 193 at ¶¶46-49). Pall asks the Court to ignore both the definition set forth in the specification and the express language of the claims. That is improper. Entegris’s construction, on the other hand, is both consistent with the intrinsic record and supported by law. Therefore, the Court should adopt Entegris’s proposed construction.

E. “Quick-Connect Manifold”

The term “quick-connect manifold” appears in all asserted claims of the ‘667 patent. The parties’ dispute regarding the term “quick-connect manifold” is set forth below:

Claim Language	Entegris’s Proposed Construction	Pall’s Proposed Construction
“quick-connect manifold”	a manifold assembly for quick connection and disconnection of a disposable fluid separation module	A manifold assembly that allows a module to be connected quickly and easily to the fluid processing system.

		This quick connect engagement may be accomplished in a somewhat sequential arrangement. <i>See</i> Col. 2, ll. 35-47, col. 5, l. 62-col. 6, l. 4.
--	--	---

Pall continues to assert that the term “disposable” has no bearing on the construction of the term “quick-connect manifold,” because the disposable nature of the module is not a “significant consideration” (D.I. 199 at 27). Pall also asserts that because in the patent’s specification quick connections may be achieved either simultaneously or somewhat sequentially, the Court should ignore the “simultaneous” language of the claims (D.I. 199 at 26-27). But, a patentee’s right to exclude is defined by the very language of the claims. *See Phillips*, 415 F.3d at 1312. The patentees of the ‘667 patent expressly claimed a “quick-connect manifold” for a “**disposable** fluid separation module” in each of the claims that recites a quick-connect manifold and fluid separation module. *See* ‘667 patent independent claims 1, 2, 14, 24, and 25 (emphasis added). Moreover, they expressly claimed essentially simultaneous engagement in each claim. *Id.*

In attempting to eliminate the terms “disposable” and “simultaneous” -- ostensibly to bolster an invalidity defense -- Pall attempts to construe the term “quick-connect manifold” in a vacuum, ignoring the very words that it perceives to threaten its invalidity defense. Such a construction is impermissible. *See Pause Tech. v. TiVo Inc.*, 419 F.3d 1326, 1331 (Fed. Cir. 2005) (“Proper claim construction . . . demands interpretation of the entire claim in context, not a single element in isolation’.”) (quoting *Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999)). The Court should avoid Pall’s erroneous approach to claim construction, which seeks to ignore other claim terms and to remove the terms to be construed

from the context of the remainder of the claims in which they appear. The claims are clear that the quick connect manifold is for a “disposable” separation module and results in essentially “simultaneous” engagement.

Thus, the Court should adopt Entegris’s proposed construction and construe the term “quick-connect manifold” as “a manifold assembly for quick connection and disconnection of a disposable fluid separation module.”

F. “Receptor”

The term “receptor” appears in asserted claims 2, 3, 5, 7, 8, 13, 14, 22 and 25-28 of the ‘667 patent and asserted claim 2 of the ‘424 patent. The parties’ dispute regarding the term “receptor” is set forth below:

Claim Language	Entegris’s Proposed Construction	Pall’s Original Proposed Construction	Pall’s New Proposed Construction
“receptor”	an element that receives the fluid separation module	<p>A “receptor” is an element that receives the filter capsule and may be moved relative to the fluid connector member to cause the connectors to engage and disengage.</p> <p>By the doctrine of claim differentiation, the receptor does not need to be attached to the fluid connector member. <i>See</i> ‘667 Patent Claim 3.</p>	<p>A “receptor” is an element that receives a module.</p> <p>By the doctrine of claim differentiation, the receptor does not need to be attached to the fluid connector member. <i>See</i> ‘667 Patent Claim 3.</p>

In its opposition, Pall corrected an erroneous assertion from its opening memorandum, and now acknowledges that independent claims 14 and 25 expressly claim a “receptor *attached to* the fluid connector member” (D.I. 199 at 29) (emphasis added). Therefore, it makes no sense to construe a “receptor” as “not need[ing] to be attached to the fluid connector member” as Pall proposes. Pall belabors its argument as if Entegris’s proposed construction would limit all

claimed instances of “receptor” to ones in which the “receptor” is attached to the fluid connector (D.I. 199 at 28-29). It clearly does not.

In particular, Entegris’s proposed construction sets forth only that the “receptor” is “an element that receives the fluid separation module.” There is no mention in Entegris’s proposed construction as to whether the receptor is attached to the fluid separation member. The claim language clearly addresses this matter on its own.

Similarly, Pall takes issue with Entegris’s proposed construction that the receptor receives a fluid separation module. But that is precisely what the claims say. Each of the asserted claims incorporating the term “receptor” expressly requires that the receptor receive a *separation module*. Entegris’s proposed construction appropriately recites precisely what the claims say. Pall’s arguments contrary to this otherwise straightforward construction are indicative of Pall’s alternate agenda (*i.e.*, advancing as much of its unsupportable invalidity defenses through claim construction as possible). Pall’s approach to claim construction is improper.

Entegris’s proposed construction is consistent with the claim terms as used throughout the patents and with the understanding of a person of ordinary skill in the art at the time of the invention (D.I. 193 at ¶¶57-62). Therefore, Entegris’s proposed construction should be adopted.

G. “Separation Module”, “A Separation Element Contained Within The Housing” and “A Separation Element Within The Housing”

The term “separation module” appears in all asserted claims of the ‘667 and ‘424 patents. The term “a separation element contained within the housing” appears in asserted claims 1 and 5 of the ‘424 patent. The term “a separation element within the housing” appears in asserted claim 7 of the ‘424 patent. The parties’ disputes regarding these terms are set forth below:

Claim Language	Entegris’s Proposed Construction	Pall’s Proposed Construction
----------------	----------------------------------	------------------------------

“separation module”	an enclosed assembly meant to be removed and replaced as a unit including at least a housing, a separation element, and appropriate fluid connections	An assembly capable of being removed and replaced as a unit. By the doctrine of claim differentiation, there does not have to be a permanent connection between the separation element and the housing of the module. <i>See</i> ‘424 Patent Claim 13.
“a separation element contained within the housing”	plain meaning	By the doctrine of claim differentiation, there does not have to be a permanent connection between the separation element and the housing. <i>See</i> ‘424 Patent Claim 13.
“a separation element within the housing”	plain meaning	By the doctrine of claim differentiation, there does not have to be a permanent connection between the separation element and the housing. <i>See</i> ‘424 Patent Claim 13.

In its opposition, Pall faults Entegris for proposing a construction for the term “separation module” (instead of “module”), even though Pall’s arguments regarding the term “module” are primarily directed to whether or not the separation element is permanently attached to the housing (D.I. 199 at 31-32). Because in construing the term “module,” Pall makes assertions about the separation element contained within the module, Pall is necessarily construing a “separation module.” Recognizing this fact, Entegris proposed to Pall that the parties construe the term actually at issue. Pall’s suggestion that Entegris has done anything improper should be rejected. Entegris simply sought to clarify for the Court the real issue to be resolved.

Remarkably, after two rounds of claim construction briefing, Pall has never addressed the patentees’ express definition of “disposable fluid separation module” (*i.e.*, a fluid separation

module “in which the separation element is permanently attached to the housing” (‘667 patent at 2:1-4 and ‘424 patent at 2:4-7)). Try as it might to ignore this express disclosure, Pall cannot escape the fact that when the patentees claimed a “disposable fluid separation module,” they claimed a fluid separation module in which the separation element is permanently attached to the housing. Pall incorrectly asserts that “[e]xcept for claim 13 of the ‘424 patent, all the other asserted claims are silent as to whether the separation element is permanently connected to the housing of the module” (D.I. 199 at 31-32). To the contrary, because of the patentee’s express definition, every time the patentees claim a “disposable fluid separation module,” the claims are anything but silent about the permanent connection between the separation element and the housing. *Phillips*, 415 F.3d at 1316 (“Consistent with that general principle, our cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.”); *Hormone Research Found., Inc. v. Genentech, Inc.*, 904 F.2d 1558, 1563 (Fed. Cir. 1990) (“It is a well-established axiom in patent law that a patentee is free to be his or her own lexicographer”) (citation omitted). For this reason alone, Pall’s proposed construction must fail.

In prior briefing, Entegris has already addressed Pall’s other arguments (repeated from its opening memorandum) regarding the “capable of being” language in Pall’s proposed construction (D.I. 191 at 32-36; D.I. 201 at 20-24). That proposed language is also in error, as it incorrectly applies irrelevant language from the patents’ specifications -- describing an entirely separate element (*i.e.*, the size, shape, and location of the connectors). Moreover, Pall does not contest the fact that in the patents’ specifications the patentees defined a “separation module” as an enclosed assembly including at least a housing, a separation element, and appropriate fluid

connections, which is removed and replaced as a unit. Thus, Entegris's proposed construction is consistent with the intrinsic evidence and should therefore be adopted.

Regarding the term "a separation element within the housing," Pall (in its opposition) incorrectly asserts that Entegris "insists that this term requires the permanent attachment of the separation element within the housing" (D.I. 199 at 35). That is not true. Entegris proposes that the term "a separation element within the housing" be given its plain meaning.

The term "a separation element within the housing" appears in independent claim 7 of the '424 patent, which is directed to a "disposable fluid separation module." As discussed above, the patentees defined the term "disposable fluid separation module" as a fluid separation module "in which the separation element is permanently attached to the housing" ('667 patent at 2:1-4 and '424 patent at 2:4-7). It is the "disposable fluid separation module" term in claim 7 that necessitates that the separation element be permanently attached to the housing -- not the "a separation element within the housing" term.

Moreover, as discussed previously, Pall's claim differentiation argument with respect to claim 7 fails (D.I. 201 at 24-25). A patentee can expressly define a term in the specification. *Phillips*, 415 F.3d at 1316. When he or she does so, claim differentiation cannot be used to contradict the patentee's express definition. *Kraft Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362, 1368-69 (Fed. Cir. 2000). Therefore, Pall's proposed construction relying on claim differentiation to contradict the patentees' express definition should be rejected, and the term "a separation element within the housing" should be given its plain meaning.

Regarding the term "a separation element contained within the housing" (appearing in independent claims 1 and 5 of the '424 patent) Pall again incorrectly asserts that Entegris "insists that this term requires the permanent attachment of the separation element within the housing"

(D.I. 199 at 36). To the contrary, Entegris proposes that this term be given its plain meaning. Somehow, Pall argues that Entegris's proposed construction imports a limitation from the specification into the claim. That is not possible. Entegris simply proposes that the term is readily understood and should be given its plain meaning -- "a separation element within the housing" -- without importing additional, unnecessary limitations.

V. CONCLUSION

In view of the foregoing, Entegris respectfully submits that the Court should adopt its proposed claim constructions for the disputed terms of the '907, '667, and '424 patents and reject Pall's proposed constructions.

Respectfully submitted,

Dated: September 15, 2010

/s/ Stuart W. Yothers
John T. Montgomery (BBO# 352220)
Dalila Arguez Wendlandt (BBO# 639280)
ROPES & GRAY LLP
One International Place
Boston, Massachusetts 02110
(617) 951-7000

Stuart W. Yothers (BBO # 662450)
ROPES & GRAY LLP
1211 Avenue of the Americas
New York, New York 10036-8704
(212) 596-9000
stuart.yothers@ropesgray.com

Attorneys for Plaintiff Entegris, Inc.

CERTIFICATE OF SERVICE

I hereby certify that, on September 15, 2010, true and correct copies of Plaintiff Entegris, Inc.'s Reply Claim Construction Brief filed through ECF will be sent electronically to counsel for the Defendant Pall Corporation who are registered participants as identified on the Notice of Electronic Filing. A courtesy copy will be sent by the following means:

By Fed Ex Overnight:

Mark E. Phelps
H. Michael Hartmann
L. Scott Beall
LEYDIG, VOIT & MAYER, LTD.
Two Prudential Plaza, Suite 4900
Chicago, IL 60601

By Hand:

Gary R. Greenberg
Louis J. Scerra
GREENBERG TRAURIG LLP
One International Place
Boston, MA 02110

/s/ Stuart W. Yothers
Stuart W. Yothers